

CAREER PROFILE

Shelley Lowe

Game developer



Shelley's job: Programmer on *Armello*, at League of Geeks, Melbourne

What she does: Codes the game's user interface. Experienced with C# and the Unity3D game engine.

After several years of game development work in Auckland, Shelley Lowe has flown off to Melbourne at the age of 26. She's excited about a new role coding the user interface for games.

Her motivation to learn has taken her a long way.

'As a kid, I had that random idea of wanting to work in games but I had no idea what was required. I didn't know that it was a viable career path.'

Towards the end of high school, she cannily chose a university degree course that featured computer programming, giving her skills suitable for other IT jobs if game-making did not come about.

'At university, I chose papers that were relevant to gaming like computer graphics and artificial intelligence,' she says. The course was not easy.

'Doing the assignments helped, having to figure stuff out on my own, that was the more practical part.'

After her studies, she was about to spend a few months teaching herself game making when instead, she saw an ad for an internship at an Auckland game studio. She got it.

'I really enjoyed the learning side of the internship as well as making something. It was nice having that challenge of actually making something that went out into the world and people played it.'

SHELLEY'S ADVICE FOR YOUR GAME

'The important thing is user feedback. Make a prototype as quickly as possible (this could be on paper) and get people to try it out. See how they react and if they're having fun. Don't be super attached to your first idea because other people may not enjoy it as much.'

SHELLEY'S CAREER PATHWAY



Game designs benefit from early feedback



Rachel Bolstad's job: Senior researcher at NZCER (NZ Council for Educational Research)

What she does: Leads research looking at how school students and teachers use games for learning.

WHAT MAKES GAMES WORK?

Chances are you've played all sorts of games in your life. Playground games, board games with whānau, your favourite trading card game, the game on your phone that you play at the bus stop.

'Take a game you like and figure out what makes it fun. You can learn a lot from the games you already know', says Rachel Bolstad.

'Everybody is familiar with games of some kind. You could start by picking apart a familiar game and thinking about what makes that tick, what hooks people.'

Getting good ideas is more important early on than computer skills, and entries in the Game Design Competition don't have to be about digital games.

GET FEEDBACK EARLY

'Game designers frequently have to pitch their ideas to someone else, such as a funder, at an early stage,' says Rachel.

'You can practice pitching your ideas to anyone in your life – friends, peers, teachers, family members. If they don't 'get' your idea, think about what you could change or refine, and try again!'

'Start to test and play with your creation as soon as you can. Test your design with other people and then refine your ideas.'

WHY YOU WANT TO TEST YOUR IDEAS

- You don't need to map out an entire game design project in advance.
- Create the rough outline of a game and then go through cycles of improvement.
- Prototyping and testing helps you to figure out what does work and how to improve on the core game mechanic you've developed.

BIG QUESTIONS TO EXPLORE

How do people think and behave when using our roads?

How can people use our roads in safer ways?

How can a game influence the way people think about these issues?

CAREER PROFILE

Ben Tuhoē Kenobi

Game designer and researcher



Ben's job: Director of PIGsty: Play & Games Lab at Auckland University of Technology

What he does: Teaches game design tools, and brings together game developers, researchers and other experts on joint game projects

You might find Ben at a game developers' meet-up or teaching uni students how to design games. At home, he plays with his young daughter or gets out a board game with friends.

'Games are more a fabric of my being than a career,' he says. That said, he has carefully crafted his own career based around games.

Ben is 35. His middle name hints at his whakapapa. He chose his own last name partly because he identified with a certain Stars Wars hero.

After a couple of years at university he was in a bit of a slump. He was studying architecture but still looking for a purpose for his creativity.

'I loved playing games, but up until that point the thought had never come to me that someone must make the games. They just came from somewhere.

'So, I was walking along and I realised that if someone makes these things I enjoy, could that be me? From then on, working with games was going to be my focus. I locked that in. But I wasn't going to do anything stupid and drop out. I made the most of architecture school.'

Ben also spent a couple of years in a games studio, designing games. It was a rite of passage that helped him learn more about game design.

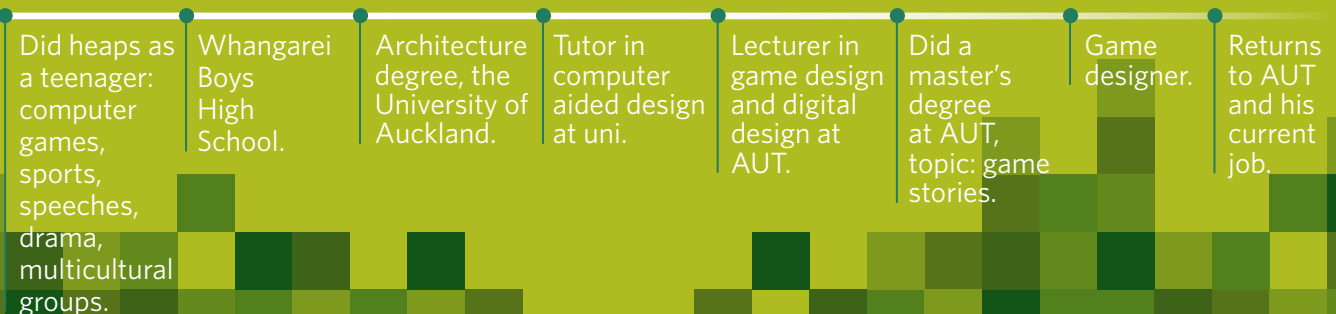
While there, he came up with ideas on how university researchers and game developers could work together more closely on making games, researching games and sharing ideas through workshops. These ideas led to his current job at Auckland University of Technology (AUT).

'I try to play as much as I can. I play sport, I play board games, I design games for my friends and family.'

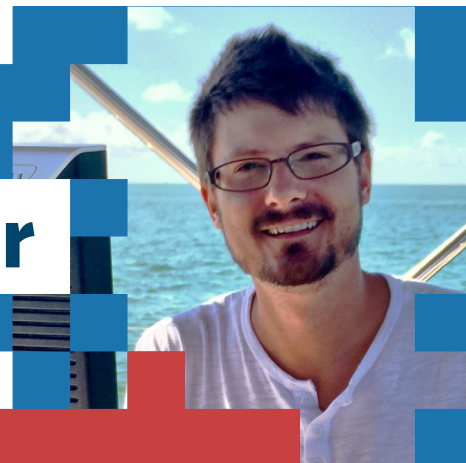
BEN'S WORK INCLUDES

- Teaching.
- Organising workshops.
- Designing games for things like diabetes awareness, paramedic training and brain injury rehabilitation.

BEN'S CAREER PATHWAY



Test with friends, and think about the end user



Martin Langhoff's job: Freelance software architect and programmer based in Florida, USA

What Martin does: Develops software packages for large companies – 'complex challenges and impossible deadlines.' Judge for the Game Design Competition 2016.

Martin Langhoff has lived in Argentina, New Zealand and the United States of America, and works on complicated software development projects. In New Zealand, he led a team that made a big contribution to Moodle, software used in thousands of schools around the world.

It's complicated stuff. But learning about computer programming starts with small steps. Martin says having a computer, curiosity, and a close friend was all it took for him to start learning to make games at a young age.

"When I was nine years old, my dad brought home a computer – I discovered that the best game was in fact to write new games, along with my best friend. To this day, I have never studied computer science in school. I wish I'd had a modern digital technology course to study, but at that time, I had to scrape one together myself."

Martin, who is 39, studied sociology and media at university. He picked up programming skills in his own time, and got involved in open source software development back when the World Wide Web was a new thing.

'The best way of learning – and the most fun – is to show something to your friends. You end up learning the most about something when you help someone else to understand it.'

MARTIN'S TIPS ON GAME DESIGN

- Involve some friends to be your testers. Work in short sprints and demo your game to your tester friends every couple of days.
- Use version control so you don't lose your work; and so you can return to an older version of your code if you break things while trying a new improvement. Being able to undo the damage lets you go forward with confidence.
- In the end, it is about the users and how they experience your game.

CAREER PROFILE

Amy Harman

Game Developer



Any's job: Junior game programmer, Rocketwerkz, Dunedin

What she does: Coding on a yet-to-be-released computer game. Most details of the game are secret so she can't talk about it.

It's clear Amy Harman enjoys her work on a major game title for PCs.

'I really enjoy the environment here and working on a game that I would want to play. I enjoy coming to work every day and everyone is the same; we like what we're doing.'

Amy stays late sometimes to finish a piece of code or to play games with her workmates. They play with an eye for each game's strengths and weaknesses, always looking to learn.

She says programming is often done with a colleague.

'We do a lot of pair programming. One person works on the computer and another person is with them. We're working together to solve a problem. It's a really interesting way to see what the other person thinks, and see different ways of doing things.'

Amy is 25. In an earlier job, she was sole programmer on a game made to help children in rural areas learn how to stay safe on the farm. It helped that she had grown up on a farm herself.

'We took an early version of that game to some schools to have kids test it. It was really good to see the areas of the game people got stuck on, the parts I needed to make clearer.'

'I've been lucky to work with some really awesome people, people that are creative.'

AMY'S ADVICE FOR YOUR GAME

'Everyone needs to have a say and discuss stuff in enough detail that you understand the core of what you're doing.'

'If you're actually making a game, test it. Let other people play it without giving them any help at all. That way you can see if the rules you made are making sense.'

AMY'S CAREER PATHWAY

Grew up on a dairy farm in the Far North.

Okaihau College: subjects included tourism, drama, English. Would have done more maths if she'd known she'd go into programming.

Couple of years on a film course, wasn't the right fit. Started teaching herself programming, liked it.

Bachelor of Software Engineering (game programming) at Media Design School, Auckland.

Sole programmer on a farm safety game made for New Zealand kids.

Land job at Rocketwerkz.

Making games with social impact



Dan Milward's job: Creator of Gamefroot game-making app

What he does: Teaches game design workshops, makes software.

'The number of games for social good is increasing all the time,' says Dan Milward, who lives in Wellington.

He says that games for social good are often designed to help people learn new things, get involved in social issues or improve their health.

He says making a digital game requires more than coding skills. Your brain also gets busy learning how to think logically and how to find problems and solve them. These high-level thinking skills are useful in both work and further learning. Dan is a case in point; his line work means he never stops learning.

'I'm an ideas person. I like being involved in projects that push the limits of today's technology.'

Back in the day, Dan invented the world's first e-commerce software for websites built with WordPress – his creation is used by many thousands of online retailers. And he's made a game engine called Gamefroot, which is one of the suggested tools for the Game Design Competition 2016.

When he's not in his office coding software, Dan is out in the community teaching young people how to make games.

'I want to make game creation easy and accessible. Making games can transform learning.'

'Don't keep your game project inside the walls of the classroom. Where possible, seek ideas, input, and play-testing feedback from other people who might have a different 'take' on a social issue than you do.'

DAN'S THOUGHTS ON GAMES FOR SOCIAL GOOD

- As a young person, you have the power to help to shape the field of social good games. Innovation in games can come from students as much as from experienced designers.
- Spend some time learning from existing games. Monopoly is a social impact game! Not everyone realises this, but Monopoly was originally designed to educate people about the dark sides of income inequality and rampant capitalism.

CAREER PROFILE

Jeremy Burgess

Mobile game developer



Jeremy's job: Technical director, PikPok, Wellington

What he does: Manages a team of 20 programmers who make games for smartphones and tablets.

Jeremy works at PikPok, a Wellington studio that develops and publishes mobile games about flying futuristic speeders, fighting zombie hordes or solving word puzzles. He leads the programming team and is 33 years old.

'It's a very young industry. You can get career opportunities that you'd normally only expect at an older age in other lines of work,' he says.

He was most of the way through university when he figured that a career in game development was a real prospect.

'For a long time, I had wanted to work in media production. I loved film, I loved TV and I loved computer games – so I wanted to work somewhere in that field.

'Some friends of mine were trying to develop their business making a game and they were putting together a pitch. They asked me to come and do some work with them over the summer. That was the first taste I had of working in game development.'

His job is all about making games for smartphones and tablets.

'It's hard work and people have to be motivated, but it's very interesting work. You learn to think laterally.'

'It's really rewarding when our game goes out the door and it gets into the hands of a lot of people.'

JEREMY'S ADVICE FOR YOUR GAME

'The biggest pitfall for a small developer is scope – keep it small. For the Game Design Competition, a small idea may turn out to be a good idea. Have a simple mechanic at the heart of it.'

JEREMY'S CAREER PATHWAY

Onslow College. Year 13 subjects: calculus, stats, physics, English, classics, history.

At home: tinkered with programming, played lots of games.

The University of Otago. Two major subjects: film and media, computer science.

Landed a junior programming role at Sidhe, a Wellington computer game studio.

Worked in the UK – 3 ½ years game dev experience over there.

Returned to Welly, got his current job at PikPok.

Ghost chips? Working with your target audience



Linda Major's job: Director of Social Marketing, Clemenger BBDO

What she does: Works on ads like Ghost Chips, Blazed and Mistakes

Ghost Chips went viral and was remixed in social media, funny videos, t-shirts and songs. People got the ad's message, liked it and used its ideas themselves.

Designing a game is a bit like the work that made Ghost Chips a success. Linda Major says the mission was to create an ad about drink driving that helped young Māori guys make the right decision on the night.

'The first job was to really understand what is going on for these guys - not just see them as a category of people but really understand their world,' says Linda.

Her team did research, visited pubs and talked with people. A social worker provided the break-through.

'He offered the insight that these guys don't want to kill the vibe. They know what to do and they care about their mates, but they don't want to look like the idiot who kills the party.'

So the ad ended up giving a solution to a social problem. It used humour and empathy to show young men it was cool to speak up.

'There was a real emotional truth that people can relate to - it's awkward to question a mate about how much they've drunk. That moment of decision at a party became the heart of the story,' she says.

A good ad about social change doesn't just mirror people's behaviour. It helps them do better. It's tricky work.

'We've put many ideas into testing that didn't work, because we assumed something about our audience or because we were trying to be too clever.'

'We need to really understand what our target audience wrestles with emotionally and find a way to help them.'

WHY YOU WANT TO TEST YOUR IDEAS

- Crash data showed who needed help. The ad agency received a brief from the client.
- Linda and her team worked out the real issue for young guys. They thought up ad ideas.
- Researchers tested these ideas with young men.
- Heaps of creative work led to a script. Actors helped finalise the characters and dialogue, keeping it real for the community.
- After filming, the ad was tested with the target audience.

Games with the power to change us



Maru Nihoniho's job: Head of Metia Interactive Ltd

What she does: As a game designer, she creates the concepts, characters and gameplay for digital games

You really can design games that help people learn how to lead better lives. It's been done in New Zealand with a web-based game that helps teenagers with mild depression.

Game developer Maru Nihoniho worked with medical researchers from the University of Auckland to make the game. Maru is the sort of person who has a busy, creative mind. After a career in hospitality, she retrained in game development and created a 3D puzzle game for Playstation. After that success, the university came calling.

'They wanted to make a game that would help New Zealand teenagers that have been diagnosed with mild depression,' says Maru.

The game is called SPARX, and it helps young people learn cognitive behaviour therapy skills which can help with depression. The game was put through scientific testing with real people, who showed improvement. The results were published in the British Medical Journal.

The game itself is a third-person role playing game in a fantasy setting – the volcano province is about dealing with emotions, for example. Players ride on hokioi, the extinct native giant eagle and spaces are adorned with the stepped poutama pattern found in tukutuku panels.

'It was challenging to make an e-therapy game,' says Maru.

'It took a lot more design around how the game played and how the player meets their objectives. It was hard, but it worked.'

You can check out the game here: www.sparx.org.nz

'Gaming is a powerful platform so if you can put some educational outcomes in there, good.'

QUESTIONS FOR YOUR GAME DESIGN

- What is the learning objective? Be clear on exactly what aspect of road safety you want players to learn about.
- Is the game fun? If a player doesn't enjoy a game in the first minute, they may never try it again...
- What keeps the player immersed in the game? What motivates them? You want them to carry on playing so they can learn more and more.